PIPADOR REVISION

MRCOG Part 1 Revision Notes

Addison's Disease (Hypoadrenalism)

ENDOCRINOLOGY • LECTURE 193

VISUAL EXAMINATION REVISION NOTES

2026 Edition

MRCOG PART 1 REVISION NOTES | ENDOCRINOLOGY

193 Addison's Disease (Hypoadrenalism)

Primary and secondary adrenal insufficiency — diagnosis, pregnancy and labour management, adrenal crisis

≈ 80%	↑ 20–40%	100 mg	APS-2
Autoimmune (UK) — 21-hydroxylase Abs	Hydrocortisone dose in 3rd trimester	IV/IM hydrocortisone for crisis / labour	Associated T1DM, thyroid, POI

■ KEY FACTS: Learning objectives

- Describe the causes, pathophysiology and features of primary and secondary adrenal insufficiency.
- Describe diagnosis, including the effect of pregnancy on cortisol tests.
- Describe management in pregnancy, labour, the puerperium and adrenal crisis.

193.1 Pathophysiology

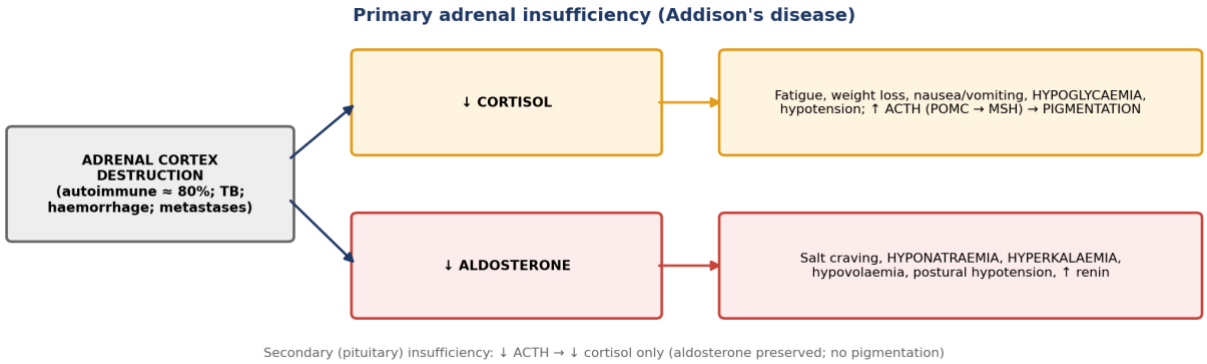


Figure 193.1 — Primary adrenal insufficiency

	Primary (Addison's)	Secondary / tertiary
Site	Adrenal cortex	Pituitary (↓ ACTH) / hypothalamus; exogenous glucocorticoids (commonest overall)
Causes	Autoimmune (APS-2 with T1DM, thyroid disease, POI), TB, adrenal haemorrhage (anticoagulation, antiphospholipid), metastases, adrenalectomy, CAH	Long-term steroids, pituitary tumours/surgery, Sheehan's, lymphocytic hypophysitis
Mineralocorticoid	Deficient (↓ Na^+, ↑ K^+)	Preserved
Pigmentation	Yes (↑ ACTH/MSH)	No (pallor)

193.2 Diagnosis

- Symptoms (fatigue, nausea, vomiting, weight loss, dizziness) mimic **hyperemesis** and normal pregnancy; clues: **hyponatraemia, hyperkalaemia, hypoglycaemia**, postural hypotension, pigmentation (buccal mucosa, scars, palmar creases).
- **9 am cortisol** (very low strongly suggests deficiency) and **short Synacthen test** — interpret with **pregnancy-specific (higher) cut-offs** because CBG and free cortisol rise; **ACTH** (high = primary), **renin** (high in primary; unreliable in pregnancy), **21-hydroxylase antibodies**, TFTs, glucose.

193.3 Management in pregnancy

Stage	Management
Maintenance	Hydrocortisone ≈ 15–25 mg/day in divided doses (placenta inactivates via 11β-HSD2); increase by ≈ 20–40% in the 3rd trimester (≈ from 24 wk); fludrocortisone continued (titrate to BP, K^+ — progesterone is anti-mineralocorticoid)
Sick-day rules	Double oral dose with fever/illness; IM hydrocortisone 100 mg emergency kit for vomiting (hyperemesis); steroid alert card/bracelet
Labour / CS	Hydrocortisone 100 mg IV/IM at onset of active labour or before CS, then 200 mg/24 h infusion or 50 mg 6-hourly (Lecture 202)
Postpartum	Double oral dose for 24–48 h, then taper to pre-pregnancy dose; breastfeeding safe
Monitoring	BP, electrolytes, glucose, fetal growth; screen for other autoimmune disease
Steroids for fetal lungs	Betamethasone does not replace maintenance (minimal mineralocorticoid/limited duration) — continue usual regimen

■ **RED FLAGS**

- **Adrenal crisis** (hypotension/shock, vomiting, abdominal pain, confusion, hypoglycaemia, ↓ Na^+/↑ K^+) — triggered by hyperemesis, infection, labour, haemorrhage, surgery or **missed doses**; may be the first presentation **postpartum**.
- **Treat immediately**: hydrocortisone **100 mg IV/IM**, then 200 mg/24 h; **IV 0.9% saline** (1 L over 1 h), glucose if hypoglycaemic; treat precipitant; do not delay for tests (take cortisol/ACTH first if possible).

193.4 Must-know summary

■ **EXAM TIP**

- Primary: ↓ cortisol **and** aldosterone — ↓ Na^+, ↑ K^+, pigmentation; secondary: cortisol only.
- Synacthen thresholds are **higher in pregnancy** (↑ CBG).
- ↑ Hydrocortisone **20–40% in 3rd trimester**; sick-day rules; IM emergency kit.
- Labour/CS: **100 mg IV/IM then 200 mg/24 h**; double dose 24–48 h postpartum.
- Crisis: hydrocortisone + saline + glucose — **never delay treatment**.

■ **MNEMONIC / MEMORY AID**

Addisonian crisis — '3 S': Salt (saline), Sugar (glucose), Steroid (hydrocortisone).